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LETTER REGARDING DESIGN CONSIDERATIONS FOR INTERIM REMOVAL ACTION AT
OPERABLE UNIT 3 (OU 3) NTC ORLANDO FL
4/14/1997
ABB ENVIRONMENTAL



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April 14, 1997

Southern Division
Naval Facilities Engineering Command
2155 Eagle Drive
North Charleston, SC 29411-0068

ATTN: Ms. Barbara Nwokike, Code 187300

SUBJECT: Interim Removal Action for Operable Unit 3
Naval Training Center (NTC), Orlando, Florida
Contract No. N62467-89-D-0317/107

Dear Barbara:

As requested on March 27, 1997 in our conference call, this letter provides information to support possible soil removal at Study Areas (SAs) 8 and 9 (collectively known as Operable [OU] 3) at Naval Training Center (NTC), Orlando. This letter also provides design considerations for the planned IRA.

I. SUMMARY

Site screening for Group I and II Study Areas (SAs) was conducted at NTC, Orlando in 1995. This effort included site screening at SA 8, the Greenskeeper Storage Area and the Former Wastewater Treatment Plant Lagoons, and SA 9, the Former Pesticide and Herbicide Storage Building (Figure 1). During site screening, surface soil samples were collected for analysis. Analytical results showed elevated levels of arsenic in SA 8 surface soils and poly-nuclear aromatic hydrocarbons (PAHs) and pesticides in one sample from SA 9. Based on these results, SAs 8 and 9 were designated as OU 3, and an IRA was directed by the Navy.

The Navy has indicated interest in an IRA consisting of excavation of surface soil (defined as soil from 0 to 2 feet below land surface) with disposal at a Navy-approved offbase location will occur for surface soil at these SAs. It should be noted that other options exist for the IRA, such as fencing or capping of the affected soils. The removal actions for SAs 8 and 9 are summarized in the following sections.

Site histories, site screening activities, and recommendations for each SA based on site screening are discussed in detail in the *Site Screening Report, Group I and II Study Areas* (ABB-ES, 1995). It should be noted that future investigations are planned for this OU (i.e., the Remedial Investigation) to complete the characterization of the nature and extent of contamination.

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II. INTERIM REMOVAL ACTION FOR STUDY AREA 8

SA 8 consists of the Greenskeeper Storage Area (Building 2134 and associated facilities) and the former Wastewater Treatment Plant (WWTP) Lagoons. The removal action for this SA considers surface soil from the vicinity of the Greenskeeper Storage Area, only, because analytical results from environmental media sampling at the WWTP Lagoons did not indicate remedial action was necessary and a Finding of Suitability for Transfer was recommended for the area.

The Greenskeeper Storage Area, Building 2134, is located on Trident Lane at the southern end of the golf course, east of Lake Baldwin. The building is currently used for storage and routine maintenance of golf course greenskeeper's equipment. Several storage sheds and containers are located on the surrounding property and contain pesticides, herbicides, paints, gasoline, and motor oil.

Analytical Results. Surface soil samples collected and analyzed at SA 8 during site screening activities revealed elevated levels of arsenic. The presence of arsenic in soils at this SA may indicate the use of pesticides containing arsenic for maintenance of the golf course. The results of the sample analyses per sample location (only for those sample locations where arsenic was detected), along with the specific northing and easting coordinates for each location are listed below.

| Sample ID Number | Arsenic Concentration (mg/kg) | Northing | Easting |
|---------------------|-------------------------------------|-----------|----------|
| 08S00200 | 4 | 1540018.5 | 554300.5 |
| 08S00300 | 9.1 | 1540039.3 | 554289.9 |
| 08S00400 | 4.9 | 1540115.4 | 554300.0 |
| 08S00500 | 7.2 | 1540088.1 | 554335.2 |
| 08S00600 | 45.2 | 1540024.9 | 554341.8 |
| 08S00700 | 577 | 1540015.9 | 554344.1 |
| 08S00800 | 12.2 | 1539994.8 | 554366.7 |

Analytical results for all environmental media samples collected at SA 8 during site screening are provided in the *Site Screening Report, Groups I and II Study Areas* (ABB-ES, 1995).

Recommended Excavation. The recommended excavation surrounding each sample location is summarized below and is shown on Figure 2. The 4 corners of each excavation area will be demarcated with pin flags by ABB-ES prior to excavation. The area of excavation may be modified by ABB-ES based on field observations.

08S00200, 08S00300, 08S00400, and 08S00500: The recommended excavation surrounding each of these sample locations is 6 feet long by 6 feet wide by 2 feet deep. Each of these samples locations is highlighted on Figure 2.

08S00600, 08S00700, and 08S00800: The recommended area of excavation for these sample locations is the area bounded by the pavement (west of the sample locations), Building 2134 (south of the sample locations), the 250-gallon diesel aboveground storage tank (AST) (north of the sample locations), and a line drawn north-northeast from the northeastern edge of Building 2134 to a line drawn east-southeast from the 250 gallon diesel AST. This area is shaded on Figure 2. For this excavation area, the removal contractor should consider three factors:

- 1) The motor oil storage locker and the waste oil storage locker will need to be temporarily relocated during excavation activities. After completion of the excavation and site restoration activities, the storage lockers should be returned to their original location.
- 2) Excavation directly adjacent to Building 2134 may need to be limited so that differential settlement of the building foundation does not occur. The stability of the building foundation must remain in pre-excavation conditions.
- 3) The 250-gallon diesel AST may need to be temporarily re-located during excavation activities. Excavation directly adjacent to the AST may cause differential settlement of the AST foundation. If the AST is re-located, it should be returned to its original location upon completion of excavation and site restoration activities.

Estimated Volume of Soil Removal for IRA. Based on the preceding estimates, the estimated volume of soil for the IRA at SA 8 is 1,070 ft³ or 40 yd³ (in-place volume).

Confirmatory Sampling. Confirmatory sampling will not be necessary for this interim removal action. As the Remedial Investigation/Feasibility Study (RI/FS) for OU 3 will be completed in the fall of 1997, and surface soil sampling will be included in this investigation. Confirmatory sampling in the vicinity of the excavated areas will be postponed until the RI/FS investigation.

III. INTERIM REMOVAL ACTION FOR STUDY AREA 9

SA 9 is located on Trident Lane near the southeastern shore of Lake Baldwin. A pesticide and herbicide storage building was formerly at this location. During its useful life, this building was used by the U.S. Air Force and the Navy from the early 1950s to 1972 and was demolished in 1981.

Investigations at this SA are summarized in two reports: the site screening report for Groups I and II Study Areas (ABB-ES, 1995) and the Verification Study (Geraghty & Miller, 1986).

Analytical Results. One surface soil sample collected and analyzed during site screening activities at SA 9 revealed elevated levels of one PAH (benzo(a)pyrene), alpha-chlordane, and

gamma-chlordane. The analytical results for this sample are listed below. Sample location 09S00100 was not surveyed during site screening activities; approximate northing and easting coordinates for the sample location are listed below and are based on the survey data obtained for other sample locations at the SA.

| Sample ID Number | Chemical Concentration ($\mu\text{g/kg}$) | Northing | Easting |
|---------------------|--|----------|---------|
| 09S00100 | benzo(a)pyrene = 780 alpha-chlordane = 2,300 gamma-chlordane = 2,400 | 1539450 | 553800 |

Analytical results for all environmental media samples collected at SA 8 during site screening are provided in the *Site Screening Report, Groups I and II Study Areas* (ABB-ES, 1995).

Recommended Excavation. The recommended excavation surrounding sample location 09S00100 is 5 feet long by 5 feet wide by 2 feet deep. The 4 corners of this excavation area will be demarcated with pin flags by ABB-ES prior to excavation. The area of excavation may be modified by ABB-ES based on field observations.

Estimated Volume of Soil Removal for IRA. Based on the preceding estimates, the estimated volume of soil for the IRA at SA 9 is 625 ft³ or 23 yd³ (in-place volume).

Confirmatory Sampling. Confirmatory sampling will not be necessary for this interim removal action. As the RI/FS for OU 3 will be completed in the fall of 1997, and surface soil sampling will be included in this investigation. Confirmatory sampling in the vicinity of the excavated areas will be postponed until the RI/FS investigation.

IV. HEALTH AND SAFETY CONSIDERATIONS

Health and safety during the implementation of the interim removal action will be the responsibility of the removal contractor. Health and safety air monitoring conducted during site screening activities has not indicated the need for respiratory protection. Level D personnel protection has been adequate for site assessment activities to date. However, excavation increases the potential for personnel exposure to contaminated soil. Dust monitoring and dust suppression may also be required to control exposure to airborne contaminants. Unanticipated site conditions discovered during routine health and safety monitoring of the interim removal action activities may result in the need for an upgrade to higher levels of protection.

V. DISPOSAL CONSIDERATIONS

The removal contractor should conduct this interim removal action in accordance with U.S. Environmental Protection Agency and Florida Department of Environmental Protection (FDEP) regulations. ABB-ES believes that the soils at SAs 8 and 9 are considered listed hazardous

wastes as defined by the Resource Conservation and Recovery Act because pesticide chemicals not used for their intended purpose (i.e., P-listed wastes) have most likely contaminated soils at these study areas.

Soil at the SAs have not been characterized for disposal purposes; this characterization is the responsibility of the removal contractor. Analytical requirements for this characterization should be determined by the receiving disposal facility.

NTC, Orlando is considered the generator of these wastes. The removal contractor should coordinate with the facility for signing of manifests for transportation and disposal.

VI. SITE RESTORATION REQUIREMENTS

After excavation, each area should be restored with clean fill (as certified by the FDEP) and reseeded.


VII. REFERENCES

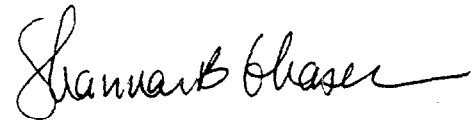
ABB Environmental Services, Inc. ABB-ES), 1995. *Site Screening Report, Groups I and II Study Areas, Naval Training Center, Orlando, Florida*: prepared for Southern Division, Naval Facilities Engineering Command, North Charleston, South Carolina. Draft, November.

Geraghty & Miller, 1986. *Verification Study, Assessment of Potential Soil and Ground-Water Contamination at Naval Training Center, Orlando, Florida*: prepared for Southern Division, Naval Facilities Engineering Command, North Charleston, South Carolina, December.

If you have any further questions or comments, please call John Kaiser at (407) 895-8845 or Shannon Gleason at (703) 769-8145.

Very Truly Yours,
ABB ENVIRONMENTAL SERVICES, INC.


John P. Kaiser
Installation Manager


Shannon B. Gleason
Task Order Manager

cc: W. Hansel (SDIV) Lt. G. Whipple (NTC, ORL)
N. Rodriguez (USEPA) O. MacNeil (Bechtel)
J. Mitchell (FDEP) S. McCoy (Brown&Root)

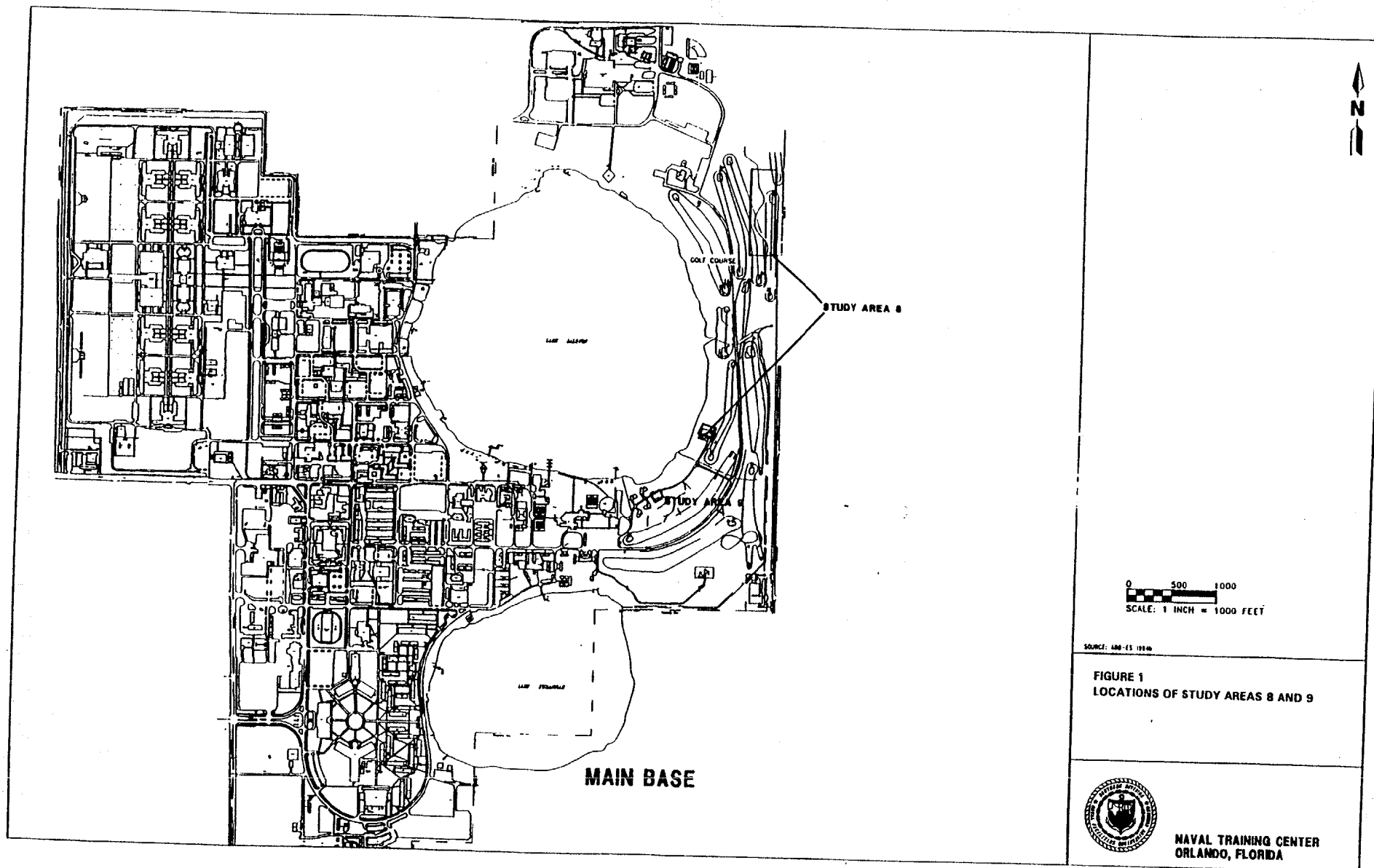


FIGURE 1
LOCATIONS OF STUDY AREAS 8 AND 9



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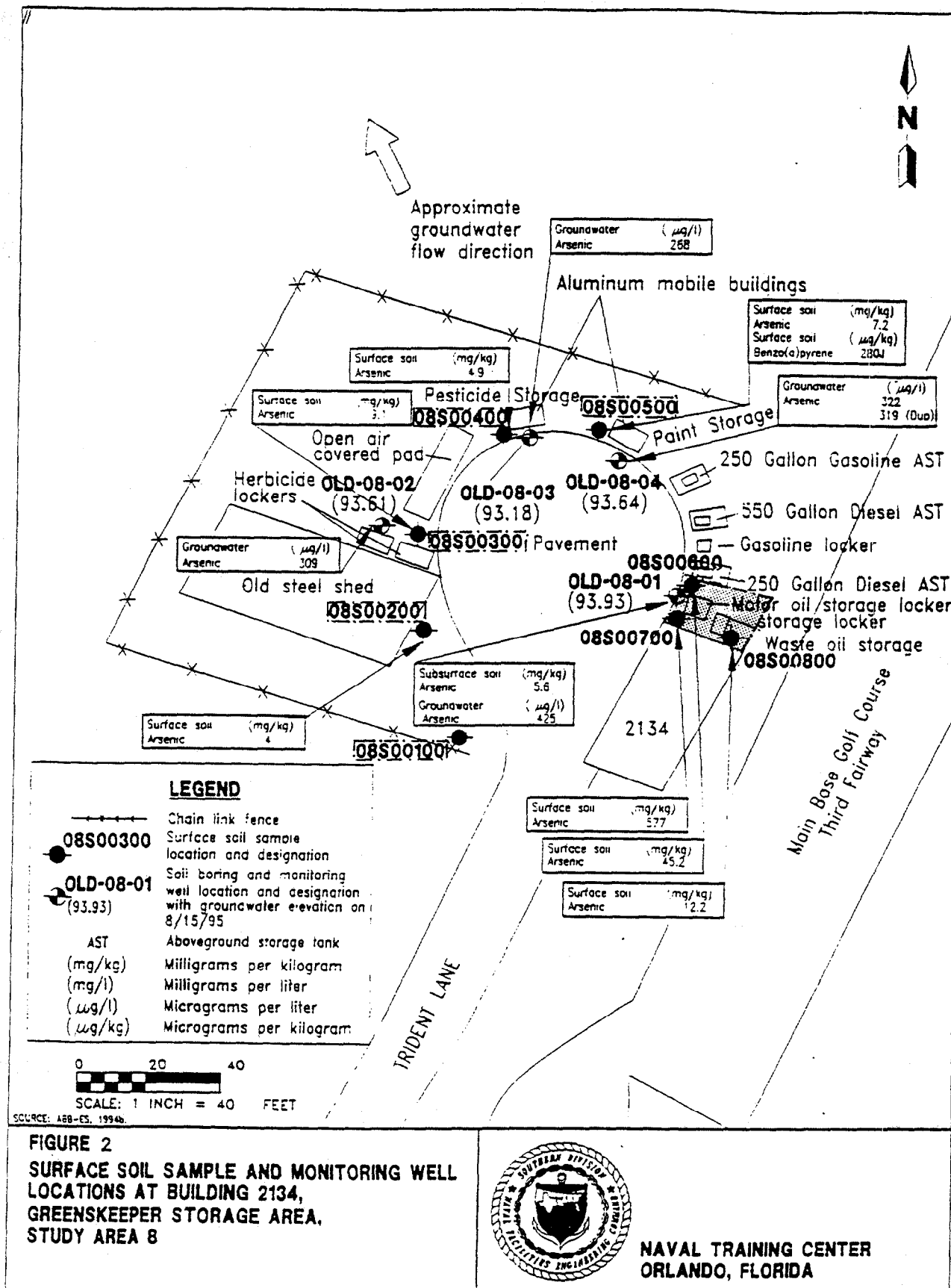


FIGURE 2
SURFACE SOIL SAMPLE AND MONITORING WELL
LOCATIONS AT BUILDING 2134,
GREENSKEEPER STORAGE AREA,
STUDY AREA 8



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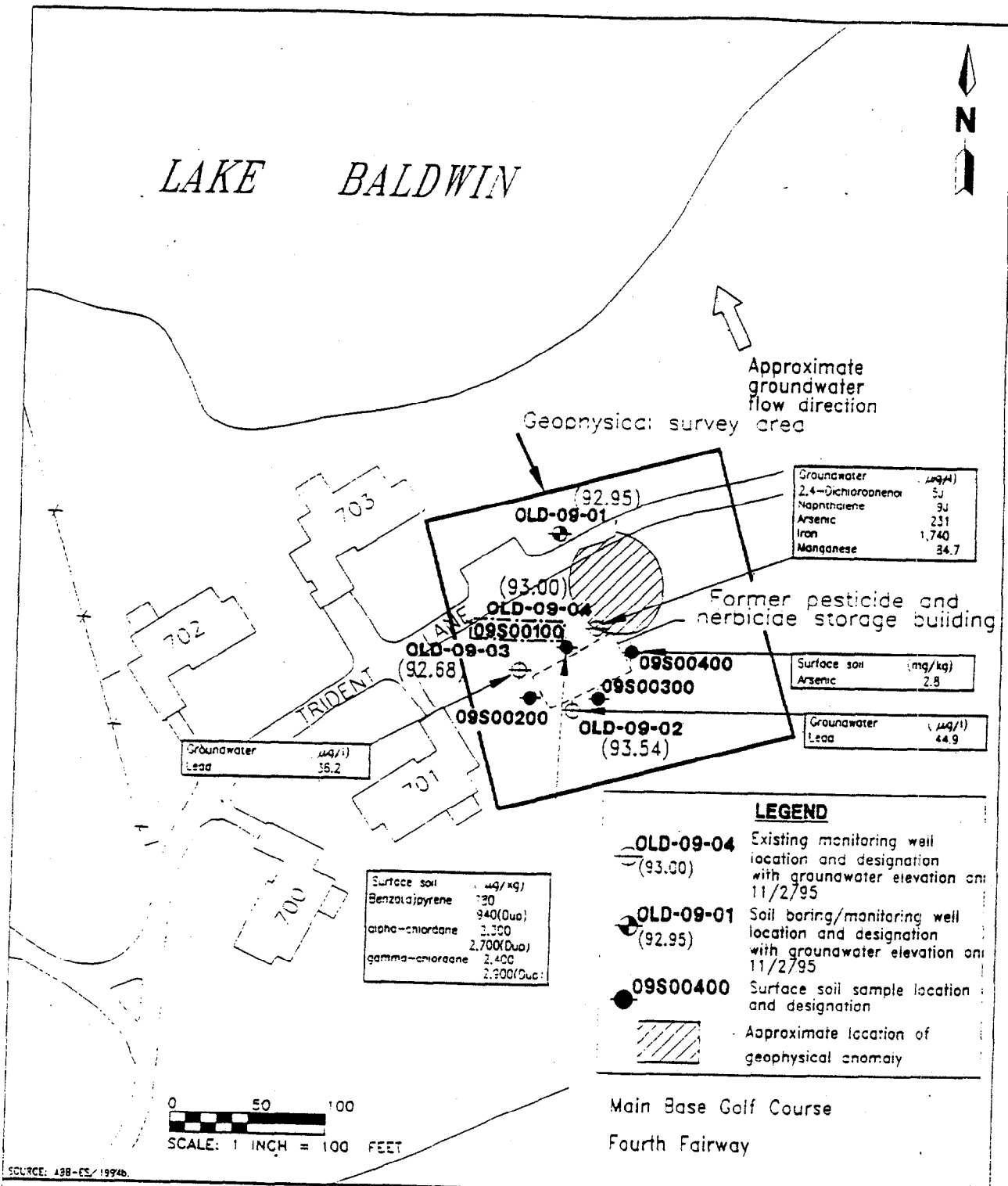


FIGURE 3
SURFACE SOIL SAMPLE, MONITORING WELL
LOCATIONS, AND GEOPHYSICAL SURVEY AREA
AT UNF-14, FORMER PESTICIDE AND HERBICIDE
STORAGE BUILDING, STUDY AREA 9



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